IN THE SPECIFICATION:

Please replace the "Disclosure of the Invention", beginning at line 6 of page 4 and extending to line 17 of page 5, with the following:

**Summary of the Invention**

An object of the present invention is to provide an improved method of detecting one or more faces in digital colour images.

In accordance with an aspect of the present invention, a method of detecting a face in a color digital image formed of a plurality of pixels includes selecting a color distribution model from a plurality of color distribution models, the selection being dependent on at least one image capture condition provided with the color digital image. Once the color distribution model has been selected, the plurality of pixels are tested using the color distribution model to determine those pixels having predominantly skin color. Thereafter, only those pixels determined as having predominantly skin color are subjected to further facial feature analysis while those pixels not being predominantly of skin color are not subjected to the further facial feature analysis.

In another aspect of the invention, the image capture condition is acquired at a time the color digital image is captured.

In another aspect of the invention, the color digital image is encoded according to a predetermined format and the image capture condition is represented as meta-data associated with the predetermined format.

In another aspect of the invention, the image capture condition includes lighting conditions at a time the color digital image was captured.

In another aspect of the invention, the testing step includes a sub-step, preceding the testing, of dividing the color digital image into a plurality of regions, each region including a plurality of pixels. The testing is performed on pixels within each region to determine those regions that are predominantly of skin color. The subjecting step further includes performing the facial feature analysis on only those regions determined to be predominantly of skin color.

In another aspect of the invention, a region is determined to be predominantly of skin color if more than a predetermined percentage of the total number of pixels in the region are classified as being of skin color.

In another aspect of the invention, the plurality of regions are geometrically divided from the color digital image.

In another aspect of the invention, the plurality of regions are formed of pixels having substantially homogenous color.

In another aspect of the invention, the plurality of regions are formed using a region growing method based upon color differences.

In another aspect of the invention, distribution models are generated using previously sampled facial image data. In this way, color distribution models can be generated for a particular image capture device and separate color distribution models can be generated for different image capture conditions.

In another aspect of the invention, the image capture condition includes lighting conditions at a time the color digital image was captured and separate color models are generated for different lighting conditions at a time the previously sampled facial image data was captured. Examples of different color distribution models generated for different lighting conditions

include: color distribution models for images taken with a flash; for images taken without a flash; for images taken indoors; and for images taken outdoors.

In various aspects of the invention, the color distribution models are represented in a variety of ways. As examples, color distribution models may be represented as frequency histograms of color representation vectors, as probability distributions of color representation vectors, and as binary maps of color representation vectors. The color representation vectors may also take on different forms. For example, the color representation vectors may be derived from perceptual color space values of predetermined skin-color pixels in previously sampled facial image data, or the color representation vectors may contain chromatic color values derived from those RGB values of predetermined skin-color pixels in the previously sampled facial image data.

In another aspect of the invention, a binary map of color representation vectors includes a percentage of the skin color pixels that were identified in the previously sampled facial image data. Using such a binary map, a pixel is classified as being of skin color if the color representation vector corresponding thereto occurs within the binary map.

In another aspect of the invention, a pixel is classified as being of skin color if the frequency of the color representation vector corresponding thereto exceeds a predetermined threshold frequency.

In another aspect of the invention, a pixel is classified as being of skin color if the probability of the color representation vector corresponding thereto exceeds a predetermined probability threshold.